'BATTLE FOR MIDWAY'

DATE: 4th June 1942,

PLACE: MIDWAY ISLAND

THE AUTHOR
Alan Steel is one of the original UK wargamers and has been playing and designing wargames for nearly twentyfive years.

PSS

P.S.S.452 STONEY STANTON RD. COVENTRY CV6 5DG. TEL: COVENTRY (0203) 667556

WARGAMERS SERIES

BATTLE FOR MIDWAY



INSTRUCTION BOOKLET

THE BATTLE FOR MIDWAY

INDEX

1. INTRODUCTION

Many Computer Games of the 'ARCADE' variety can be played by simply loading the program and getting hold of the Joystick. Any rules etc. can be picked up as you go along. This is NOT a game of this type. Do not take this to mean that this is a game of vast complexity, it is not that either. However it is a game you will learn and enjoy far quicker if you follow this Manual. You must at least read Sections 1 to 17 to understand the basic game.

This game is about the Battle for Midway Island fought by the American and Japanese Navies. In the game you are the Commander of all the American forces. It is your task to stop the Japanese invading Midway and to sink as many of their aircraft carriers as possible. Your main ships are the carriers 'ENTERPRISE', 'HORNET' AND 'YORKTOWN'. In the words of the U.S. commander-in-chief. 'Those three carriers are all that stand between the Japanese fleet and the American coastline.' For a more detailed account of the battle see Section 21 'Midway, the Battle.'

2. TO LOAD

For Disk Version of the Game see Section 24. (CBM 64).
Ensure the tape is fully rewound.
CBM 64: Plug your joystick into Port 2.
Press SHIFT and RUN STOP together.
The message on the screen will say: PRESS PLAY on your cassette player.
AMSTRAD CPC 64: Press CTRL and the small enter key and follow the prompts.

3. GETTING STARTED

When the Program is loaded the message PRESS 'S' FOR JOYSTICK PRESS 'K' FOR KEYBOARD will be seen. Press S. Note see Section 23 for keyboard. (CBM 64 only)

The screen will now show PRESS '1,2 OR 3' TO SELECT GAME LEVEL. Press 1.
You will now be asked PRESS 1,2,3,4,5, OR 6 TO SELECT GAME SPEED. Press 4.
On the next screen Press P to play.

4. MAP MODE

The screen will clear and a map of the Sea around Midway will be displayed. Note the 24 hour clock at the top of the screen. Any times mentioned in the manual which are written G Minutes refer to time as measured on this clock. Not real time.

In the bottom right of the screen you will see a WHITE BOX. By moving the joystick the box can be moved around the map. This box is called the COM BOX and is used to order moves, attacks etc.

The light blue areas (shallows), names and latitude/longitude markers play no part in the game. They are included for reference only. The green area near the centre is Midway Island. The following symbols can appear on the map. Colour refers to the background colour of the unit, all symbols are black.

Colour	Unit Symbol	Unit
White	1	T.F.16 (US Fleet)
White	2 or Z	T,F,17 (US Fleet)
Yellow	Aircraft	US Search Aircraft
White	Aircraft	US Attack Aircraft
Brown	Blank	US Search Area
Red	J	Japanese Fleet
Red	Aircraft	Japanese Attack Aircraft

The dotted lines are the routes followed by the Japanese Fleets. These are shown on Level 1 to enable the Player to find the Japanese easily. This is because Level 1 is used mainly to learn to play the game.

The Pink dotted line which starts near the top of the screen, heads for Midway, then turns towards the bottom of the screen, is the route taken by the Japanese carrier fleet. (1st MOBILE FLEET)

The White dotted line that crosses the screen horizontally and ends above Midway, is the route of the Battleship Fleet. (MAIN BODY)

The Yellow dotted line that starts at the bottom left corner and ends at Midway is the route of the invasion fleet. (OCCUPATION FORCE)

5. UNIT BOOK

When you can see the map on the screen you are in MAP MODE. While you are in MAP MODE You can read the UNIT BOOK. This shows the American and Japanese Forces as they are at the start of the game. It is useful to work out which Japanese fleet is which when you have an aerial view.

Key 1 :	US T.F.16	Key 4 :	Japanese 1st Mobile Fleet
Key 2 :	US T.F.17	Key 5 :	Japanese Main Body
Key 3 :	US Base Midway Island	Key 6 :	Japanese Occupation Force

Looking at the Unit Book stops the game clock. So if you wish to freeze the game press any key from 1 to 6. To leave the Unit Book and return to Map Mode press the Space Bar.

6. To Get a REPORT

Use the joystick to move the COM BOX over T.F.16 (White square with black 1). The COM BOX will turn Brown (red on AMSTRAD), now press R for a report. The display will show the ships and aircraft that are in T.F.16. To return to MAP MODE Press the Space Bar. Use the above method to obtain a REPORT of MIDWAY Island and T.F.17.

7. To MOVE a UNIT

Place the COM BOX over one of the U.S. Search Aircraft units (Yellow Square with Black aircraft CBM64 or brown square with White aircraft on AMSTRAD). When COM BOX turns BROWN (AMSTRAD : RED) Press the FIRE BUTTON on the joystick. The COM BOX will turn GREEN (PALE BLUE on AMSTRAD). Move the COM BOX to where you want the Search Aircraft to go. Now Press the Fire Button again and the COM BOX will turn White. This shows that the MOVE Order has been given and as time passes the Search Aircraft Unit will move to that position. All Aircraft and Fleets are moved by this method. Try moving different Units. The Fleets (T.F.16 and 17) will obviously move much slower than the Aircraft Units.

8. LAUNCH AIRCRAFT

Place the COM BOX over T.F.16, when the COM BOX is BROWN (RED on AMSTRAD) Press P. The screen will show the AIR PLOT for T.F.16. the display shows which AIR UNITS are present and which are ready for LAUNCH (Take Off). Only those Units ON DECK can be LAUNCHED. Air Units ARMING are not yet ready to Launch. The Display will show C.A.P. ON DECK. The word CAP is an abbreviation for Combat Air Patrol. The CAP is a group of Fighter Aircraft that will Patrol over your Fleet to combat Japanese Air Attacks. Press L and the Message LAUNCHING UNDERWAY will be seen. The screen will change back to the MAP MODE. Wait until 10 G Minutes have passed and then look at the AIR PLOT again. You will see that C.A.P. IS AIRBOURNE and there is FREE SPACE ON DECK. Air Unit 2 will not be ON DECK until 40 G Minutes after the C.A.P. has been Launched.

When AIR UNIT 2 IS ON DECK Press L and LAUNCH It. After 10 G Minutes the Unit will appear on the map as a black aircraft on white square.

Note: If the Game Clock is now 06.00 or later, the Japanese may attack Midway. As we are still learning the game ignore this attack.

9. AIRCRAFT FUEL & STATUS

Move the COM BOX over Air Unit 2 and get a REPORT. As you can see Air Units REPORTS tell you the numbers and types of Aircraft in the Unit. Also note the message BOMBS LOADED. If the Air Unit had made an Attack, the message would read BOMBS GONE. Only Air Units with BOMBS LOADED will make an Attack. The bottom line of the display shows the FLYING TIME LEFT in G Minutes. This is the amount of Fuel the Air Unit has left, when the fuel runs out the flying time left will be 0 and the Unit will crash into the sea. As a warning when a Unit has only 60 G Minutes Flying Time left the screen will show a message. The Unit Symbol will flicker on the Map to show which unit is short of fuel. When an Air Unit LANDS it is refueled and rearmed with Bombs.

10. To LAND AIRCRAFT

Now return to the MAP MODE and Move Air Unit 2 next to T.F.16. (Put COM BOX over Unit 2, when COM BOX is Brown (RED on AMSTRAD) Press Fire Button. Move COM BOX next to T.F.16 and Press Fire Button again). When Air Unit 2 is next to T.F.16 use the COMBOX to get the AIR PLOT for T.F.16. and then Press K to LAND. When the Air Unit Lands it will disappear from the map. Use the AIR PLOT again to see that it has landed and is now ARMING.

11. AIR SEARCH

Use the COM BOX to move one of the SEARCH Aircraft Units (CBM64: Yellow square with Black Aircraft, AMSTRAD : Brown square white aircraft) along the White Dotted line. As the SEARCH Aircraft moves notice that the surrounding Brown Search Area moves as well. This is the area that the Search Aircraft are covering and any Japanese Fleet in this Area will be seen. The Japanese fleet will appear as a RED square with a Black J in it (AMSTRAD : White J). Move the COM BOX over the Japanese Fleet and when it is Brown (AMSTRAD : RED) Press R for a REPORT. You will see an Aerial view of the Japanese Fleet. The easiest way to find out which fleet it is, is to count the number of Aircraft Carriers you can see. (Aircraft Carriers are the ships with the flat decks). Then use the UNIT BOOK to find out which Japanese Fleet has this number of Carriers.

Note: To return to the MAP MODE from the Aerial View Press the space bar as you would for a normal REPORT.

12. To MAKE an AIR ATTACK

When you have found a Japanese Fleet LAUNCH one of your AIR UNITS. Then Move it next to the Japanese Fleet. If necessary move the SEARCH AIRCRAFT to make sure the Japanese Fleet remains visible. When the AIR UNIT arrives next to the Japanese Fleet it will flicker and then you will see part of the resulting Battle.

Note: An AIR UNIT will only Attack visible Japanese Fleets.

13. REAL TIME AIR ATTACKS

When an AIR ATTACK takes place you will see the Battle in real time. Before the Battle the attacking unit will flicker on the map. If there is a Japanese Air Attack on one of your Units you will see a flickering Red square with a Black Aircraft on it. Your Air Attacks will, as you have seen, cause your Air Unit to flicker.

The screen will next show part of the Fleet (or Island) that is being attacked. Warning sirens will sound and a message will tell that the unit is being attacked by Air. Notice the WHITE circular Gun Sight at the lower right of the screen. This is the Anti Aircraft gun sight and it is moved with the joystick. Using this gun it is possible to shoot down Attacking Aircraft. Position the sight over an Aircraft and Press the Fire Button. If the gun is not fired the sight will move faster to simulate Power traverse. Even if you do not fire, aircraft will be shot down. This is because there are other A.A. Guns firing as well as your own.

You will also notice that it is possible to fire the A.A. Gun at your OWN Aircraft when they are attacking a Japanese Fleet. This feature was left in the game for the 'Arcade Players' who cannot resist shooting at anything that moves on the screen.

14. REAL TIME SURFACE ATTACKS

A Japanese Surface Attack (using ships) is shown on the Map by a flickering Japanese Fleet symbol. The screen will then show your Fleet (or Island) with a warning message. At the Left of the screen you will see a Square Gun Sight. This is the Gun Sight for your Surface Gun. The Surface Gun sight is moved by means of the joystick. The gun flashes on the horizon are the Japanese Fleet firing at you. The gun sight magnifies so if you scan the horizon with it, you should be able to find a Japanese warship. Now Press the Fire Button, a message at the bottom of the screen will tell you where your shot fell. If the range is long, lower the Gun Sight. If it is Short raise the Gun sight.
Note: It may require more than one ON TARGET shot to set the enemy warship on fire.

Hopefully you will not see Surface Attacks during the game, as you will realise when you read Section 16.

15. DAY and NIGHT

At 19.00 Hrs on the Game clock it will get dark and the Search Aircraft will be removed from the Map. No Air Searches are allowed at Night. You will also find that Air Units cannot be LAUNCHED at night. It is of course still possible to LAND Air Units that arrive back late from an Attack. Surface Attacks are allowed at night so you have been warned.
Note: The Game Clock will run twice as fast at night as in the day. So land any Air Units still flying as soon as possible. It will get light at 04.00 Hrs and the Search Aircraft will return to the Map. The second day (June 5th) is the same as the first and you may move, attack etc. as normal.

16. BASIC TACTICS (How to Win)

As in the real Battle of Midway the Japanese will give up and retreat if the four carriers of the 1st Mobile Fleet are sunk. When this happens they will retreat to the West edge of the Map and the game will end in an American victory. Knowing this your main aim should be to find the 1st Mobile Fleet and then attack it with every Air Unit you have. After an Air Unit has attacked Land it to refuel and rearm and then send it back into the attack. Use the REPORT Aerial View to see how many Japanese carriers are left after each attack.

Do not make Air Attacks on other Japanese fleets until the four carriers have been sunk. On level 1 the 1st Mobile fleet will start the game at the top of the Pink dotted line. It will sail down this line as time passes so it should be easy to find. There is a slight problem with all this, the Japanese will not wait like sitting ducks, but will launch Air Attacks of their own.

To counter this as soon as it is Light LAUNCH the C.A.P. on Midway Island, T.F.16 and T.F.17. If the Japanese make an Air Attack and the C.A.P. is not airborne your carriers or airfield will be destroyed. You also know (as did the Americans; that the Japanese will launch an Air Attack on Midway Island. By 06.00 Hrs AIR UNIT 1 on Midway should be Airborne. If the Japanese catch this Unit on the ground it may be destroyed in the Attack on the Airfield.

When your Air Units have made an Attack get them back to your fleets or airfields. They can then LAND to refuel and rearm.
Note: AIR UNIT 1 from Midway contains Heavy Bombers and cannot land on carriers. If Midway airfield is destroyed you will have to leave this Unit to run out of fuel.

Avoid Surface Attacks there will be only one outcome, a Japanese victory. (See Section 22 to explain why this is). At night be very careful. The Japanese will sometimes move in under cover of the dark to make Surface Attacks. Keep well to the East of Midway at night. Use your AIR SEARCH units to check the sea around you in the morning.

CBM 64 Only

During Play Testing of the game some players had problems with the MOVE commands. For example when returning Air Unit 2 to T.F.16 to LAND. They would place the COM BOX over Air Unit 2 when it was Brown they pressed the Fire Button for a MOVE. The COM BOX turns Green and then they moved the COM BOX over. T.F.16. When they then pressed the Fire Button again to enter the Move Command the COM BOX would remain Green and not change to White. The Problem is that the COM BOX has entered the Move for Air UNIT 2. But has then picked up T.F.16 and is now waiting for a Move order for this fleet. This facility speeds up play when you have mastered the game, but is confusing at the beginning. To avoid this move Air Unit NEXT TO T.F.16 not over it. The COM BOX will then not Pickup T.F.16 and so return to a White colour. Remember to LAND or ATTACK you only have to be NEXT TO another unit so move Air Units with this in mind.

17. To SAVE/LOAD or QUIT GAME

At any time when you are in the MAP MODE you may QUIT the game by pressing the f1 key on your CBM 64 or ESCAPE on your AMSTRAD. You can now RESTART the game by pressing R. On AMSTRAD follow the prompts.

CBM 64 Only

To Save/Load with the Disk Version of the Game see Section 24(CBM 64 only).

Put a blank cassette tape in your cassette player, then press C. If you wish to save more than one game on the cassette tape make a note of the tape counter reading. Now press Record and Play. The screen will go blank until the saving is complete.

To load a previously Saved game you must first load the game as normal. Press 1 for the Level and Speed. Now Press B to Load the Saved game. Put the saved game tape in your cassette player. Make sure it is rewound to the start of the saved game. Now press C and then press Play on the cassette player. The saved game will load and then start.

18. GAME SPEED

The GAME SPEED is selected at the start of the Game. The table below shows the real time it takes for 10 Minutes of Game time to pass, at the different speeds.

Game Speed	Real Time	Game Speed	Real Time
1	3 Seconds	4	15 Seconds
5	6 Seconds	5	20 Seconds
3	9 Seconds	6	30 Seconds

19. GAME LEVELS

Level 1
As mentioned earlier Level 1 is mainly used to learn the basics of the Game. The Routes taken by the Japanese Fleets are shown by Dotted lines. On the first day T.F.16 will not be attacked by Air so you should have little difficulty in winning.

Level 2
This is the normal game, the Japanese fleets will not be visible at the start. They will approach from the West of Midway Island as in the real battle. Any of your Fleets are liable to be attacked by Air and Sea.

Level 3
This level supposes that the Japanese are aware that the Americans have broken their Naval Code. Knowning this they set a trap for the Americans (You). By reading section 21 you should be able to work out where the extra Japanese carriers are from.

20. ADVANCED TACTICS

Search Aircraft
Do not allow the two Search Areas to overlap. There is no advantage in having two Search Aircraft covering the same area. Try not to move one Search Aircraft Unit through the others Search Area. This will upset the search patterns of these units. See Section 22 for the reason. When you find a Japanese fleet try to find the course it is on. Then if you wish to 'Shadow' it, fly the Search Unit alongside. If the Search Unit is directly in the path of a Japanese fleet, it will be driven off by A.A. fire or Japanese C.A.P. If one of your fleets is involved in Surface combat you may have difficulty finding the Japanese fleet afterwards. If you keep sweeping the area with Search Units you will find them. Again see section 22.

AIR UNITS
AIR Units 2,3,4 and 5 may LAND Or LAUNCH from any Task Force or Airbase. This means that they do not have to return to the Task Force that Launched them to refuel and rearm. If for example the T.F.17 carrier is sunk, Air Units 4 and 5 may be resupplied at Midway or T.F.16. Assuming of course they where not on board the carrier when it was sunk.
There are limitations to this a maximum of TWO Air Units (not counting C.A.P) may be on board a Task Force or Airbase at once. If further Air Units Land on the carriers they will be pushed into the sea to keep the Flight Decks open. If an Air Unit is already on deck when you land another Air Unit chaos will result. The Air Unit on deck will be taken below to make room for the Landing Air Unit. So you will then have to wait for the resulting confusion to be sorted out.

Air Units 2 and 3 from T.F.16 (two carriers) are larger than Air Units 4 and 5 from T.F.17 (one carrier). Air units 2 and 3 can land on T.F.17 to resupply during the day. However if they are on T.F.17 at night there may be a problem. Rearming aircraft in the day is one thing but at night more complicated maintenance is carried out. If there are too many aircraft on a carrier at night the extra aircraft will again go into the sea. Of course if large numbers of Aircraft from Air Units 2 and 3 have been lost in the day you will be alright. (?)

Any REPORTS taken of a fleet or airbase will show the number of aircraft that were present at dawn. (June 4th). At 00.40 Hrs June 5th these air strengths will be altered to show the aircraft that will be available at dawn on June 5th.

Keep your Air Units away from your fleets and airbase if they are not LANDING. If an AIR Unit is passing a fleet or airbase and is NEXT to that fleet and you have ordered another Air unit to LAND. You may find that the wrong Air Unit has landed.

Use the REPORT facility on your Air Units to keep track of which Air Unit is which. During battles involving all 5 Air Units it is very easy to become confused. In play testing we had Air Units that had no bombs trying to attack, fully fueled Air Units landing to refuel etc.

SURFACE UNITS
Do not allow T.F.16 and T.F.17 to move too far apart. If this happens you will be constantly searching two sea areas to avoid surface attacks. On the other hand if they are too close together LAUNCHING and LANDING will become confusing.

At night the safest direction to sail is due East. This tactic is not certain to succeed on Level 3, but is probably still the best idea.

REMEMBER
Your first aim MUST be to find the Japanese carriers. Then hit these carriers and keep hitting them until they are sunk. In this game be aggressive with your Air Units and Defensive with your Surface Units. The player that holds onto his Air Units and plays a defensive game is certain to lose.

21. MIDWAY, the battle

In May 1942 the Japanese military leaders had every reason to feel pleased with themselves. In the five months following Pearl Harbour the armed forces of the Rising Sun had swept across the Pacific like a tidal wave. Ship after ship of the Allied navies had followed the American's Battleship fleet to the ocean floor. Supposedly invulnerable Allied bases had been crushed and captured like so many sandcastles.

Only two small flaws spoilt this perfect picture. The first was the mysterious American bomber raid on Tokyo. The Japanese could not understand where these bombers had come from. (They where in fact launched from the carrier Hornet).

The other setback was the way that two American carriers (Lexington and Yorktown) had upset the Japanese plans to capture New Guinea. The action is now called the Battle of the Coral Sea. The Americans had sunk one Japanese carrier and damaged two others. The Japanese had sunk the Lexington but had to call off their invasion of Port Moresby. Without this Port the Japanese were unable to complete the conquest of the New Guinea.

The Japanese Commander-in-Chief of the First Fleet, Admiral I. Yamamato proposed a plan to destroy the remains of the American Fleet. His carriers would launch a surprise dawn raid against the Midway Island airbase. With the airbase destroyed the Japanese would land and capture Midway. Yamamato thought that he would then have two days to prepare for the arrival of the U.S. Fleet. The plan was extremely complicated and included Submarines and a diversionary attack by two carriers 1,500 miles north of Midway.

The plan required complete surprise to work properly. This was the one thing it would not have. Some months earlier the Japanese Navy had been broken. The U.S. Navy was well aware of the plan and prepared their own strategy to counter it.

At dawn on June 4th the four Japanese carriers, all veterans of Pearl Harbour, launched their aircraft against Midway. From the decks of the Akagi, Hiryu and Soryu roared 108 aircraft. The strike aircraft from the carrier Kaga were held in reserve. The Japanese also launched seaplanes to search for any U.S. Navy ships that might be in the area. On Board the Japanese Cruiser Tone the catapult jammed and the launch of the seaplanes was delayed. Unfortunately for the Japanese the seaplane's search area contained the waiting American fleet.

On Midway Island the Americans waited for the Japanese attack. By 06.00 Hrs all the Islands aircraft were airborne and the Midway C.A.P. attacked the approaching Japanese aircraft. The fighters on Midway C.A.P.attacked the approaching Japanese aircraft. The fighters on Midway were of older types and could not stop the Japanese attack. Although the attack caused considerable damage, it did not succeed in knocking out the airfield. The Japanese attack leader radioed that another attack was required.

Meanwhile Rear-Admiral Fletcher, commander of T.F.16, had been given the positions of the Japanese carriers by the Midway search aircraft. He ordered Rear-Admiral Spruance, commander of T.F.16, to attack. By 08.06 the carriers Enterprise and Hornet had launched 117 aircraft. Fletcher could not launch his own strike from the Yorktown until he had recovered his search aircraft. The Yorktowns airstrike finally set off at 09.05 Hrs.

Vice-Admiral Nagumo, commander of the Japanese carrier fleet, was by now deeply in trouble. American aircraft from Midway had been attacking him since 07.00 Hrs. Though they caused little damage they had delayed the landing of the aircraft that had attacked Midway. Worse still the Tone's seaplane had finally reched it's search area and reported American carriers. The second attack against Midway was cancelled and the aircraft rearmed with armour piercing bombs and torpedoes. The high explosive bombs that would have been used to attack Midway were left stacked on the decks.

The torpedoe bombers from the American fleet found Nasumo's carriers by 09.30 Hrs. From then until 10.15 Hrs a total of 41 torpedoe bombers attacked, 6 returned. Though they caused no damage the Japanese C.A.P. had all come down to sea level to attack them.

This meant that the 50 American dive bomber approaching at 19,000 feet were not observed. At 10.22 Hrs they attacked and by 10.30 Hrs the Akagi, Kaga and Soryu were blazing wrecks. Only the Hiryu escaped damage and at 11.00 Hrs her commander Rear-Admiral T. Yamaguchi, launched his counter attack.

The Japanese counter attack arrived over T.F.17 at noon. The Yorktown was hit by three bombs, severe fires started and the ship came to a standstill. By a magnificant effort the fires were controlled and the ship got underway again. Unfortunately at 14.40 Hrs a second air attack from the Hiryu again hit the Yorktown. Two torpedoes hit the Port side and for the second time the Yorktown came to a halt. When the ship seemed in danger of capsizing, captain Buckmaster gave the order to abandon ship.

The Japanese now thought they had sunk or at least badly damaged two American carriers. They did not realise that they had attacked the Yorktown twice. Thinking that the Americans had only two carriers, victory again seemed possible. The error of their thinking was about to be shown to them in no uncertain terms.

The rearmed American dive bombers found the Hiryu at 17.00 Hrs. She was soon reduced to a blazing shambles and all hope of a Japanese victory ended. Admiral Yamamoto toyed with the idea of trying to catch the American with his surface fleet. But at 02.55 Hrs June 5th he gave up and cancelled the invasion.

The burning Japanese carriers sank or where scuttled during the night. The Hiruy refusing to go down until 09.00Hrs June 5th. The amazing Yorktown did not capsize and a salvage party went on board. By noon on June 6th the Americans had every hope of towing the Yorktown to harbour. At 13.30 Hrs her luck finally ran out when she was torpedoed by a Japanese submarine. She still would not die and stayed afloat until June 7th. She sank at 05.01 Hrs 200 miles east-north-east of Midway Island.

The Japanese navy had lost 4 carriers and over 250 aircraft. The American navy lost 1 carrier and over 100 aircraft. For the first time the Japanese had been decisively defeated. From then on they found themselves more and more on the defensive. Until they were overwhelmed by the massive American Task Forces of the later war years.

22. Designers Notes

The Battle for Midway is, as are all wargames, a balance between historical accuracy, detail and playability. As the game is intended for both non-wargamers and wargamers, playability was given first priority. The main design theme of the game is to try and represent the 'Fog of War'. Many board games give, in my opinion, the player godlike powers in that he knows exactly what is happening in the battle. Any quick study of history will reveal that this is untrue. I am not suggesting that board wargames are unrealistic, just pointing out that computer and board games both have their strengths and weaknesses.

The real time action sequences are used to give a view of part of the battle. The 'Fog of War' is that the player cannot be sure that a carrier will sink even if he can see it is on fire. Worse still, for the player, some carriers that are apparently undamaged will later sink. I have also tried to recreate the pressures put on a commander by including the game clock and aircraft fuel. A version of the game was tried where aircraft automatically returned to refuel. This was found to take too much pressure off the player and the game was becoming a button pushing exercise.

The Search aircraft Units are used to represent the seaplanes that were based at Midway. Because they are seaplanes they remain operational even if Midway airfield is destroyed. You will note that sometimes the search areas break down if they overlap. This is mainly intended to punish players for using bad tactics. But it also represents the confusion that would result. The Japanese fleets have the ability to 'vanish' for a time after surface combat. This is used to represent the difficulty of telling friend from foe when large numbers of ships are in the same area.

Some players may feel I have been unfair on the Americans when it comes to surface combat. It must be noted that all the Japanese fleets have battleships, while T.F.16 and 17 do not. Also Japanese surface units had a decisive edge in battle at this stage of the war. The Battle of Savo Island is a perfect example. It was only later in the war that the American gunnery radar turned the tables on the Japanese.

On rare occasions T.F.16 or 17 may vanish from the board. This is normally associated with surface combat and means that the Task Force has been 'scattered' because of enemy action. It will after a time reform and again become visible. You will notice that if a Task Force suffers a surface attack it will retreat. The game will not allow any suicidal charges by the remaining ships of a Task Force. The cruisers and destroyers were far too valuable to throw away like this.

The victory conditions are that you, as the Americans, must sink more than two carriers for everyone of yours that is sunk. The main aim of the Japanese was to destroy the American carrier fleet. I consider that at this stage of the war the Japanese would have been prepared to lose two carriers for every American carrier sunk. Once those U.S. carriers were gone the whole of the American West Coast was open to attack.

23. KEYBOARD (CBM 64 Only)

If K is pressed in the Keyboard/Joystick selection, the following will apply. The joystick will no longer have any effect on the COM BOX. Pressing W will move the COM BOX up, Key Z will move it Down. Key A will move Left and D will move Right. Pressing S will produce the same effect as pressing the Fire Button when using the Joystick.
Note: The Keyboard will NOT control the guns in real time combat.

24. DISK VERSION (CBM 64 Only)

To Load
Insert Program disk in disk drive. Type LOAD'*',S. The program will now load and run.

To save game
After pressing f1 to quit the game, Press S for Save. Insert a blank formatted disk into the disk drive. Now press D to save the game. If another game is saved onto this disk at a later date, the original saved game will be erased. So if for some reason you wish to keep a saved game, do not save another game on the same disk.

To Load a Saved Game
Load the game as normal then press 1 for the level and speed. Now press B and insert the disk with your saved game into the disk drive. Now press D and the game will load and run. Note the Level and Speed will be that of the original Saved game.

25. UNIT BOOK CODES

The codes to show ship types are based on those used by the U.S. Navy. These and other codes are used in the UNIT BOOK and in REPORTS. Below is a list of their meanings in the game.

CODE	UNIT TYPE
AV	Seaplane Tender
AP	Troop Transport
BB	Battleship
CA	Heavy Cruiser
CL	Light Cruiser
CV	Aircraft Carrier
CVL	Light Aircraft Carrier
DD	Destroyer
F	Fighter Aircraft
D	Dive Bombers
T	Torpedo Bombers
R	Reconnaissance Aircraft
HB	Heavy Bombers

26. QUICK KEY GUIDE

PRESS OR USE:	COM BOX COLOUR		ACTION
	CBM 64	AMSTRAD	
R	BROWN	RED	Get a REPORT
P	BROWN	RED	Get AIR PLOT
Joystick	WHITE	WHITE	Move COM BOX
Fire Button	BROWN	RED	Start MOVE Order
Fire Button	GREEN	P. BLUE	End MOVE Order
Joystick	GREEN	P. BLUE	Give a MOVE Order
Space Bar	N/A	N/A	RETURN to MAP MODE
f1 (CBM 64)	Any	N/A	QUIT Game or Save/Load
Escape (AMSTRAD)	N/A	Any	QUIT Game or Save/Load
1	Any	Any	UNIT BOOK T.F.16
2	Any	Any	UNIT BOOK T.F.17
3	Any	Any	UNIT BOOK Midway
4	Any	Any	UNIT BOOK Japanese 1st Mobile Fleet
5	Any	Any	UNIT BOOK Japanese Main Body
6	Any	Any	UNIT BOOK Japanese Occupation Force

27. LAST WORD

Some of you may be puzzled by parts of the UNIT BOOK. JAP.1, JAP.2 ECT. and the column headed DAM. for Damage. These are not used in this game. They are present in case a War in the Pacific Campaign series is produced in the future.

This game took twice the time and effort that a 'Normal' Arcade game would have taken. The price, when compared to imported American Wargames, cannot be said to be excessive. Any further Wargames will obviously be dependant on the sales of this game. So if you wish to see more Wargames bear this in mind, if you provide your friends with free copies.